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A.H.B. (RAF)

*First-Line Strength of the G.A.F.  
at 3-monthly Periods during the  
European War, 1939-1945.*

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German air force First Line Strength during the European War 1939 - 1945.

Comparison of German Quartermaster-General's official records with figures published during the course of the war by A.I.3.b. in Orders of Battle and the Weekly Disposition Sheet.

The German figures shown below are extracted at three monthly intervals, dates chosen being those nearest to the end of the month in each case. A.I.3.b.'s figures are taken from the current Orders of Battle and Disposition Sheets as near as possible to the same dates.

1st Line Strength

Date	German Q.M.G.	A.I.3.b. estimates	Comments
September 2 1939	3,647	-	
September 30 1939	3,628	4,320	) Until the end of March 1941 to A.I.3.b.'s estimates were reckoned on the basis of Establishments (12 a/c per Staffel, 9 I.E. + 3 I.R.).
December 1939	4,034	4,440	
March 1940	4,542	5,000	
June 1940	4,070	5,405	
September 1940	3,888	5,710	
December 1940	3,955	5,710	
March 1941	4,508	5,710	) As the result of the findings of the SINGLETON Enquiry A.I.3.b.'s estimates were reckoned from April 1941 onwards on the basis of Initial Equipment only (9 aircraft per Staffel initially, increasing later to 12 and 15).
June 1941	4,322	4,540	
September 1941	4,356	4,540	
December 1941	4,152	4,500	
March 1942	4,234	4,330	
June 1942	4,789	4,670	
September 1942	4,697	4,740	
December 1942	3,954	4,440	
March 1943	5,308	4,685	
June 1943	5,986	5,200	
September 1943	5,118	5,205	
December 1943	5,582	5,565	
March 1944	5,604	5,615	
June 1944	5,436	4,980	
September 1944	5,728	5,140	
December 1944	5,698	5,000	
April 1945	3,515	3,670	

The following observations on the above figures are pertinent.

1. In the early period of the war lack of sufficient detailed knowledge on flying units brought about an overestimate of the operational strength of the known units and an underestimate of the number of flying units in existence. Identification of units newly formed was very delayed.

These faults were entirely due to the difficulties which arise in peace time and in the first phases of any war consequent upon any lack of large scale employment of the air force in question and upon lack of many sources of information which can only function effectively in time of war.

It is to the credit of A.I.3.b., however that the section insisted, then as always, on basing their estimates of German strength on known units with but a small extra allowance of aircraft unallocated to units to cover delays in identification. Thus, the over-inflated estimates based on wide generalities, which appeared notably in American publications, were avoided. Accepting the fact, however, that the use of I.E. + I.R. as a basis for reckoning strengths was wrong, it is clear from A.I.3.b.'s estimates up to the period when large scale operations were undertaken in April 1940 that insufficient allowance was made for the delay which must occur in identification of units during periods of quietude and development.

2. With the beginning of large scale and continued operations from May 1940 onwards sources of intelligence were better able to function. Information was more up-to-date and A.I.3.b.'s estimates no longer suffered from so much delay. On the contrary, an unwillingness to take into account the heavy losses which sustained operations inevitably incur was displayed in the refusal to reduce estimates of strength during the period of the Battle of France, the Battle of Britain and the night bombing offensive during the winter of 1940-41. This unwillingness was primarily due to a considerable overestimate of the strength of German reserves which persisted until detailed work on reserves and wastage was undertaken with the creation of a new sub-section in the second half of 1941.

3. From June 1941 to March 1944 A.I.3.b.'s estimates, based on Initial Equipment, were very satisfactory, the main trends in the variations of first line strength being followed correctly although not with the violent changes which the German figures reveal. The immediate effect on first line strength of heavy operations and large scale withdrawals when the first line strength is not supported by readily available aircraft reserves is clearly shown in the German figures as are the remarkable powers of recuperation which characterised the G.A.F. throughout the war. The remarkable recovery in the first six months of 1943 was brought about largely as the result of the increasing production of the F.W.190 which enabled the G.A.F. not only to create new S.E. Fighter units, but to expand existing ones and to rejuvenate and strengthen the ground attack force. Between January and June 1943 the S.E. Fighter force increased in strength by almost 600 aircraft and the Ground-attack force by almost 500 aircraft.

4. From the end of 1943 onwards the G.A.F. continued to expand and the establishment of flying units was in some cases more than doubled. That the strength of fighter units did not in fact reach establishment was due to the effects of the Allied bombing offensive against the German aircraft industry which, whilst not preventing expansion, considerably restricted it. But Initial Equipment began from this time to bear no relationship with unit strength and A.I.3.b. in their attempts to make their estimates, based on I.E., keep in line with strength, frequently ignored establishment figures and credited the German units with I.E. in keeping with their suspected strength.

This method was unsatisfactory and impossible to maintain without confusion. Further difficulties arose with the inauguration of the series of heavy bomber attacks on German oil installations for so successful were the attacks that enemy flying operations had immediately to be drastically restricted. During the course of the summer and autumn of 1944 the rising German fighter strength bore no relationship with the scale of operations which was maintained. Consequently, strength figures, in assessing potential enemy effort, became more and more meaningless and conversely, enemy effort became increasingly useless as a basis for assessing strength.

5. These were the difficulties which A.I.3.b. had to face when in order to make their estimates more realistic it was decided towards the middle of 1944 to change their figures from an I.E. to a strength basis. That they underestimated strength by about 10% is therefore not surprising particularly as the capacity of the German aircraft industry to recuperate and improvise, after the series of heavy attacks it had sustained in the first half of 1944, had been underestimated.

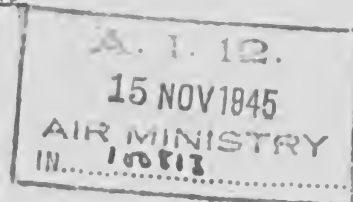
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Strength of the G.A.F. during the European War 1939-1945.

The attached Disposition Sheet shows the first line and second line strength of the German Air Force at three monthly periods during the European War from September 1939 to December 1944. The figures have been compiled from the records of the 6th Abteilung of the German Quartermaster General's Section at O.K.L. These records were made first at weekly, later at 10 day intervals. The original documents are available for inspection with A.I. 12, Monck Street.

The German records provide a complete sequence of G.A.F. strength. They do not provide a complete survey of the disposition of G.A.F. Strength, as in the early records the names of the Commands to which the units were subordinated is frequently omitted. The final strength figure given, that for April 1945, was taken from the records of General KOLLER, the Chief of Staff of the Luftwaffe.

A.I. 3.(b)  
October, 1945.



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First line Strength of the G.A.F. at 3 monthly periods during the European War 1939-1945.

Date	Theatre	L.R. Bombers	Bomber Recce.	Dive Bombers	S.E. Fighters	T.E. Fighters	ARTY Co-op.	Coastal	Total	2nd line aircraft
Sept. 2 1939	Not determinable	1172	377	<i>Grand total</i> 336	771	408	343	240	3,647	Nil
Sept. 30 1939	Not determinable	1207	300	318	1125	194	319	270	3,628	Nil
Dec. 30 1939	Not determinable	1367	315	402	1024	412	303	211	4,034	Nil
March 30 1940	Not determinable	1656	356	392	1258	325	309	246	4,542	Nil
June 29 1940	Not determinable	1384	290	414	1107	357	285	233	4,070	Nil
Sept. 28 1940	Not determinable	1293	361	452	920	292	353	197	3,888	Nil
Dec. 28 1940	Not determinable	1330	416	436	829	414	360	170	3,955	Nil
March 29 1941	Not determinable	1450	409	411	1104	521	430	183	4,508	Nil
June 28 1941	Western Front	240	125	-	350	-	-	95	-	-
	Defence of Reich	-	-	-	-	Not determinable	Not determinable	-	-	-
	Eastern Front	730	290	303	829	-	-	31	-	-
	Mediterranean and Balkans	139	25	86	34	-	-	23	-	-
	Non-operational	55	-	-	-	-	-	75	-	-
	Total	1164	440	389	1213	454	438	224	4,322	Nil

Date	Theatre	L.R. Bombers	Bomber Recce.	Dive Bombers	S.E. Fighters	T.E. Fighters	Army Co-op.	Coastal	Total	2nd line aircraft
Sept. 27 1941	Western Front	226	105	-	430	Not	-	83		
	Defence of Reich	-	-	-	-	determ-	-	-		
	Eastern Front	798	293	250	629	inable	211	48		
	Med. & Balkans	132	26	102	78		12	35		
	Non-operational	345	-	26	-		71	56		
	Total	1502	424	378	1137	399	294	222	4,356	Nil
Dec. 27 1941	Western Front	130	140	-	527	-	-			
	Defence of Reich	-	-	-	-	240	-			
	Eastern Front	590	260	131	512	70	184	Not		
	Med. & Balkans	208	36	83	194	92	20	determ-		
	Non-operational	342	-	97	-	-	79	inable		
	Total	1270	436	311	1233	402	283	217	4,152	Nil
30 March 1942	Western Front	208	130	-	532	-	-	97	1,130	
	Defence of Reich	-	-	-	-	213	-	-	-	
	Eastern Front	621	184	299	454	57	151	-	1,766	
	Med. & Balkans	215	53	110	271	90	13	39	791	
	Non-operational	286	-	12	-	7	159	33	497	
	Total	1330	367	421	1257	367	323	169	4,234	Nil
30 June 1942	Western Front	233	148	-	564	14	-	62	1,250	
	Defence of Reich	-	-	-	-	229	-	-	-	
	Eastern Front	937	245	358	580	193	377	70	2,760	
	Med. & Balkans	226	61	80	171	88	23	48	697	
	Non-operational	82	-	-	-	-	-	-	82	
	Total	1478	454	438	1315	524	400	180	4,789	Nil

Date	Theatre	L.R. Bombers	Bomber Reconn.	Dive Bombers	S.E. Fighters	T.E. Fighters	Army Co-op.	Coastal	Total	2nd line aircraft
30 Sept. 1942	Western Front )	276	145	-	599	-	-	66	1,467	-
	Defence of Reich )	-	-	-		346	-	-		
	Eastern Front	771	209	288	611	81	364	80	2,417	20
	Med. & Balkans	246	67	95	266	61	14	11	754	-
	Non-operational	59	-	-	-	48	-	-	59	-
	Total	1352	421	383	1470	536	378	157	4,697	20
30 Dec. 1942	Western Front )	205	128	-	636	-	-	97	1,445	-
	Defence of Reich )	-	-	-		379	-	-		
	Eastern Front	383	213	206	395	50	254	27	1,528	155
	Med. & Balkans	434	56	50	212	68	23	12	855	-
	Non-operational	112	-	14	-	-	-	-	126	-
	Total	1134	397	270	1243	497	277	136	3,954	155
31 March 1943	Western Front	265	176	-	328	-	31	102	902	-
	Defence of Reich	-	-	-	185	460	-	-	645	-
	Eastern Front	475	196	448	549	56	269	47	2,440	214
	Med. & Balkans	277	78	66	336	140	24	35	956	-
	Non-operational	477	12	75	106	36	49	10	765	-
	Total	1494	462	589	1504	692	373	194	5,308	214
30 June 1943	Western Front	148	168	-	404	-	30	134	884	-
	Defence of Reich	-	-	-	387	421	-	-	808	-
	Eastern Front	552	224	578	612	52	274	38	2,330	215
	Med. & Balkans	268	40	150	380	142	48	47	1,075	-
	Non-operational	684	27	11	26	93	48	-	889	-
	Total	1652	459	739	1809	708	400	219	5,986	215

Date	Theatre	L.R. Bombers	Bomber Recce.	Dive Bombers	S.E. Fighters	T.E. Fighters	Army Co-op.	Coastal	Total	2nd line aircraft
30 Sept. 1943	Western Front	159	140	-	340	83	20	124	866	-
	Defence of Reich	-	-	-	643	770	-	-	1,413	-
	Eastern Front	258	267	469	531	92	268	64	1,829	216
	Med. & Balkans	337	31	84	136	32	49	62	731	-
	Non-operational	229	22	6	-	-	22	-	279	-
	Total	983	400	559	1650	977	299	250	5,118	216
31 Dec. 1943	Western Front	689	165	-	369	121	19	107	1,410	-
	Defence of Reich	-	-	-	562	660	-	-	1,222	-
	Eastern Front	226	179	519	473	82	204	28	1,711	271
	Med. & Balkans	82	42	16	191	43	74	58	506	31
	Non-operational	581	39	73	-	-	32	8	733	-
	Total	1578	425	608	1535	906	329	201	5,582	302
31 March 1944	Western Front	451	150	-	166	156	28	93	1,044	-
	Defence of Reich	-	-	-	853	564	-	-	1,417	-
	Eastern Front	163	178	612	513	88	231	46	1,831	347
	Med. & Balkans	154	47	62	146	59	77	45	590	77
	Non-operational	531	29	107	-	-	55	-	722	-
	Total	1299	404	781	1678	867	391	184	5,604	424
30 June 1944	Western Front	361	152	53	526	177	25	92	1,386	-
	Defence of Reich	-	-	-	458	710	-	-	1,168	-
	Eastern Front	488	162	569	475	136	237	26	2,094	329
	Med. & Balkans	-	32	88	63	22	47	53	305	54
	Non-operational	242	19	219	-	-	3	-	483	91
	Total	1091	365	929	1523	1045	312	171	5,436	474



Date	Theatre	L.R. Bombers	Bomber Recce.	Dive Bombers	B.E. Fighters	T.E. Fighters	Army Co-op.	Coastal	Total	2nd line aircraft
30 Sept. 1944	Western Front	167	83	10	307	42	32	77	718	43
	Defence of Reich	-	-	-	1294	830	-	-	2,124	-
	Eastern Front	148	165	649	373	287	249	14	1,885	269
	Med. & Balkans	-	45	24	-	-	53	26	148	73
	Non-operational	644	30	135	-	-	45	-	854	119
	Total	959	323	818	1974	1159	379	117	5,729	509
31 Dec. 1944	Western Front	353	64	104	1208	50	66	24	1,869	129
	Defence of Reich	-	-	-	548	1192	-	-	1,740	-
	Eastern Front	79	162	621	469	47	275	29	1,683	249
	Med. & Balkans	-	15	-	-	-	28	-	43	22
	Non-operational	96	25	121	51	-	45	25	363	40
	Total	528	266	846	2276	1289	415	78	5,698	440
End of April 1945	Northern Germany, Norway & Baltic States	Not determinable							2,063	
	Southern Germany, Czechoslovakia & Italy.								1,452	
	Non-operational Total								<u>3,515</u>	Not known

Compiled from official German records by  
A.I.3.(b).  
October, 1945.